

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

TBK-Patent

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Bavariaring 4-6

D-80336 MÜNCHEN

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TBK - PATENT

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

Date of mailing
(day/month/year)

12-02-2004

Applicant's or agent's file reference

WO 34763

REPLY DUE

within 60 days from
the above date of mailing

International application No.

PCT/IB 2002/002312

International filing date (day/month/year)

26-06-2002

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC

H04L 12/28, H04Q 7/38

Applicant

Nokia Corporation et al

1. ☐ The written opinion established by the International Searching Authority:
☐ is ☐ is not
considered to be a written opinion of the International Preliminary Examining Authority.
2. This first (first, etc.) opinion contains indications relating to the following items:
- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
- When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).
- How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.
- Also** For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.
- If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 26-10-2004

Name and mailing address of the IPEA/SE

Patent- och registreringsverket

Box 5055

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Form PCT/IPEA/408 (cover sheet) (January 2004)

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WRITING OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/IB 2002/002312

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this opinion has been established on the basis of (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."*):

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages _____ as amended (together with any statement) under Article 19

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/IB 2002/002312

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

Claims

Inventive step (IS)

Claims

Claims

Industrial applicability (IA)

Claims

Claims

1-5, 9, 10, 14-18, 22, 23, 27-31,
and 40-46

2. Citations and explanations:

The examination is based on the originally filed claims 1-46.

Reference is made to the following document:

D1: EP1156623

The problem to be solved, according to the applicant, is to avoid that a terminal frequently changes access point, which causes undesired pauses in an application in the terminal and unnecessary signalling and resource occupancy in the network [page 4 line 1 to page 5 line 8].

D1 describes a method for load balancing in a WLAN. Each access point in the network monitors its traffic load and sends this information (ATT) to the connected terminals. Each terminal monitors its traffic load (AUTT) and receives the traffic load information (ATT) from the different access points. The terminal then uses the ATT and the AUTT in a predetermined cost function. The result from this cost function is used by the terminal to select a connection with one of the access points in the network [see the abstract and claim 1].

The subject-matter of independent claims 1, 14, 27 and 40-43 differs from the method described in D1 in that the roaming decision is not made in the terminal. The problem to be solved was, as stated above, to avoid that a terminal frequently changes access point. D1 proposes a solution to this problem by using the ATT and AUTT in a cost function in the terminal. The subject-matter of claims 1, 14, 27 and 40-43 does not clearly describe why the terminal would not change access

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

points frequently if the roaming decision was done in the access point instead of in the terminal. It is considered obvious for a person skilled in the art that the AUTT described in D1 could be sent to the access point from the terminal, that the access point then does not have to send the ATT to the terminal, and the roaming decision could then be made in the access point. To do this is not considered to result in any unexpected technical effects. It is considered obvious for a person skilled in the art that where the roaming decision is made, if the decision is made on the same parameters, is of no relevance.

The subject-matter of claims 1, 9, 10, 14, 22, 23, 27 and 40-46 is therefore not considered to involve an inventive step.

The access point sends the ATT (the traffic load parameter) within a beacon and probe response frame. This implies that an access point identification element is sent to the terminal along with an access point load status indicator [see claim 3]. Accordingly, the subject-matter of claims 2, 15 and 28 is not considered to involve an inventive step.

The signal strength is measured [see page 7 line 54]. Measuring interference ratio (C/I) and measuring terminal transit power status are considered to be well known features for a person skilled in the art and these features are generally always used in WLANs. The subject-matter of claims 3-5, 16-18 and 29-31 is therefore not considered to involve an inventive step.